

AMENDMENTS TO THE CLAIMS:

1-123 (Cancelled).

124. **(Currently amended)** A process for preparing an orthopaedic implant prosthesis bearing having improved mechanical properties and increased wear resistance comprising the steps of:

providing an ultrahigh molecular weight polyethylene (UHMWPE) preform from which the bearings are to be fabricated;

heating the preform to a temperature above the melting point of the UHMWPE to about ~~[[300°C]]~~ 230°C;

and then, subsequently irradiating the perform.

125. **(Currently amended)** The process of claim 124, wherein the heating step is performed at temperatures from about 137°C to about ~~[[300°C]]~~ 230°C.

126. **(Currently amended)** The process of claim 124, wherein the preform is irradiated with gamma radiation at a dose of about ~~[[0.5]]~~ 1.0 Mrad to about ~~[[30]]~~ 20 Mrad.

127. **(Currently amended)** A process for preparing an orthopaedic implant prosthesis bearing having improved mechanical properties and increased wear resistance comprising the steps of:

providing an ultrahigh molecular weight polyethylene (UHMWPE) preform from which the bearings are to be fabricated;

Irradiating the preform; and

heating the preform to a temperature from above the melting point of the UHMWPE to about 300°C.

128. **(New)** The process of claim 127, wherein the heating step is performed at temperatures from about 137°C to about 300°C.

129. **(New)** The process of claim 127, wherein the preform is irradiated with gamma radiation at a dose of about 0.5 to about 30 Mrad.